

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Amendment of Parts 2 and 25 to Implement)	IB Docket No. 99-67
the Global Mobile Personal Communications)	
by Satellite (GMPCS) Memorandum)	
of Understanding and Arrangements)	
)	
Petition of the National Telecommunications and)	RM No. 9165
Information Administration to Amend Part 25 of)	
the Commission's Rules to Establish Emission)	
Limits for Mobile and Portable Earth Stations)	
Operating in the 1610-1660.5 MHz Band)	

COMMENTS OF MOBILE SATELLITE VENTURES SUBSIDIARY LLC

Mobile Satellite Ventures Subsidiary LLC ("MSV") hereby files these Comments on the Commission's *Further Notice of Proposed Rulemaking* ("FNPRM") regarding additional restrictions on emissions from L-band mobile earth terminals ("METs") to protect the Global Navigation Satellite System ("GNSS"). MSV urges the Commission to apply the proposed carrier-off-state emission limit and the stricter emission limit in the 1605-1610 MHz band only to L-band METs that are manufactured one year or more after the effective date of an *Order* adopting these limits. Such an approach will avoid the unfairness of applying new limits retroactively to METs that were manufactured prior to the adoption of a rule specifying final limits and will also provide MET manufacturers with a reasonable period to transition to these new limits. In addition, the Commission should not require L-band METs already authorized under existing Title III blanket licenses to obtain a Part 2 equipment certification demonstrating compliance with the applicable emissions limits in Section 25.216. Requiring Part 2 equipment certification for existing authorized METs would be burdensome and unnecessary considering that, as FCC licensees, holders of blanket MET licenses are already required to comply with the

Commission's out-of-band emission rules and there is no evidence to suggest that L-band METs have been causing harmful interference to GNSS. In addition, equipment certification of existing METs would be difficult considering that some manufacturers of L-band METs are no longer in business.

Background

MSV is the successor to Motient Services Inc. ("Motient" f/k/a AMSC Subsidiary Corporation), the entity authorized by the Commission in 1989 to construct, launch, and operate a U.S. Mobile Satellite Service ("MSS") system in the L-band.¹ The first Motient satellite was launched in 1995, and Motient began offering service in 1996. In November 2001, Motient entered into a joint venture with TMI Communications and Company, Limited Partnership ("TMI"), the Canadian L-band MSS licensee, forming MSV.² MSV currently provides service to, among other customers, hundreds of federal, state, and local governmental agencies, including critical public safety organizations like the Federal Emergency Management Agency, U.S. Coast Guard, and local fire and police departments.

MSV currently holds blanket licenses authorizing METs transmitting in the L-band (1626.5-1660.5 MHz) both with MSAT-1, licensed by Canada, and MSAT-2, licensed by the United States.³ These METs have been manufactured by a wide range of companies, such as

¹ *Memorandum Opinion, Order and Authorization*, 4 FCC Rcd 6041 (1989); *Final Decision on Remand*, 7 FCC Rcd 266 (1992); *aff'd sub nom. Aeronautical Radio, Inc. v. FCC*, 983 F.2d 275 (D.C. Cir. 1993) ("Licensing Order").

² *Motient Services Inc., TMI Communications and Company LP, and Mobile Satellite Ventures LLC, Order and Authorization*, File No. SAT-ASG-20010302-00017 et al. (DA 01-2732) (Nov. 21, 2001).

³ *AMSC Subsidiary Corp., Order and Authorization*, 10 FCC Rcd 9507 (Int'l Bur. 1995); *TMI Communications and Company, L.P., Order and Authorization*, 14 FCC Rcd 20798 (Nov. 30, 1999); *TMI Communications and Company, L.P., Order and Authorization*, 15

Eaton, Mitsubishi Electronics, Narrowband, Rockwell, Trimble, Vistar, and Westinghouse Wireless Solutions.

The 1559-1610 MHz band is allocated for use by the Global Navigation Satellite System (“GNSS”), comprised of the Global Positioning System (“GPS”) and GLONASS satellite systems. Pursuant to a 1994 Memorandum of Understanding among the Commission, the National Telecommunications Information Administration (“NTIA”), and the Federal Aviation Administration (“FAA”), the EIRP density of emissions from L-band METs were not to exceed -70 dBW/MHz and the EIRP of discrete emissions of less than 600 Hz bandwidth were not to exceed -80 dBW in the 1574.397-1576.443 MHz band.⁴ In September 1997, NTIA filed a Petition for Rulemaking urging the Commission to adopt new and more stringent limits for emissions from L-band METs into the GNSS band to protect aeronautical radionavigation from interference.⁵ On March 5, 1999, the Commission issued a *Notice of Proposed Rule Making* (“*March 1999 NPRM*”) in the above-captioned proceeding proposing domestic implementation of the International Telecommunication Union (“ITU”) Global Mobile Personal Communications by Satellite (“GMPCS”) framework.⁶ To protect aircraft reception of satellite radionavigation signals from interference, the Commission proposed new emission limits for L-

FCC Rcd 18117 (Sept. 25, 2000); *Mobile Satellite Ventures Subsidiary, LLC, Memorandum Opinion and Order*, 17 FCC Rcd 12894 (July 2, 2002).

⁴ Memorandum of Understanding among the Federal Communication Commission, the National Telecommunications Information Administration, and the Federal Aviation Administration (rel. Nov. 8, 1994).

⁵ See Letter to Regina M. Keeney, Chief, International Bureau, from Richard D. Parlow, Associate Administrator, Spectrum Management, National Telecommunications and Information Administration (September 18, 1997).

⁶ *Amendment of Parts 2 and 25 to Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements, Notice of Proposed Rule Making*, IB Docket No. 99-67, 14 FCC Rcd 5871 (1999) (“*March 1999 NPRM*”).

band METs into the GNSS band identical to those previously proposed by the NTIA. *See March 1999 NPRM* at ¶¶ 44-97.

On May 14, 2002, the Commission released an *Order* adopting new emission limits for L-band METs into the GNSS bands.⁷ Specifically, for L-band METs placed in service on or before July 21, 2002, the EIRP density of emissions must not exceed -70 dBW/MHz and the EIRP of discrete emissions of less than 700 Hz bandwidth must not exceed -80 dBW in the band 1559-1587.42 MHz. 47 C.F.R. § 25.216(a). L-band METs placed in service after July 21, 2002 must meet these same emission limits but over the broader 1559-1605 MHz frequency range, as well as limit emissions in the 1605-1610 MHz band to -70 dBW/MHz at 1605 MHz to -10 dBW/MHz at 1610 MHz, as determined by linear interpolation. 47 C.F.R. § 25.216(c), (f). By July 1, 2005, METs placed in service on or before July 21, 2002 must meet the same emission limit applicable to METs placed in service after July 21, 2002. 47 C.F.R. § 25.216(d). These rules became effective on November 1, 2002.⁸

In addition to the *Order* adopting new emission limits for L-band METs, the Commission also issued the *FNPRM* proposing more stringent requirements for L-band METs to protect the GNSS. *FNPRM* at ¶¶ 80-87. The Commission proposes to tighten the emission limit for L-band METs in the 1605-1610 MHz band. *Id.* at ¶¶ 83-84. Specifically, the Commission proposes that for L-band METs placed in service after July 21, 2002, the power density of emissions must not exceed a level of -70 dBW/MHz at 1605 MHz to -46 dBW/MHz at 1610 MHz, as determined by linear interpolation, and the EIRP of discrete emissions of less than 700 Hz bandwidth shall not

⁷ *Amendment of Parts 2 and 25 to Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements, Report and Order and Further Notice of Proposed Rulemaking*, IB Docket No. 99-67, FCC 02-134 (May 14, 2002) (“*FNPRM*”).

⁸ *See* 67 Fed. Reg. 61814 (Oct. 2, 2002).

exceed a level of -80 dBW at 1605 MHz to -56 dBW at 1610 MHz, as determined by linear interpolation. *Id.* at ¶¶ 83-84 and Appendix B (proposing to adopt 47 C.F.R. § 25.216(g)). The Commission also proposes to adopt a carrier-off-state emission limit of -77 dBW/MHz in the 1559-1610 MHz band for all L-band METs, regardless of when they are placed in service. *Id.* at ¶¶ 81-82 and Appendix B (proposing to adopt 47 C.F.R. § 25.216(h)). Finally, the Commission proposes that an L-band MET cannot be operated after January 1, 2005 unless the MET has been certified under Part 2 of the rules as complying with the emission limits in Section 25.216. *Id.* at Appendix B (proposing to adopt 47 C.F.R. § 25.216(i)⁹). The following chart summarizes the various emission limits adopted or proposed for L-band METs.

Limits Applicable to L-band METs Placed in Service On or Before July 21, 2002¹⁰

Frequency Band	Limit Pursuant to 1994 MoU	Proposed by NTIA in September 1997	Proposed by FCC in March 1999 NPRM	Adopted by FCC in May 2002 Order
1574.397-1576.443 MHz	-70dBW/MHz -80dBW/600Hz			
1559-1580.42 MHz		-70dBW/MHz	-70dBW/MHz	
1559-1585.42 MHz		-80dBW/700Hz	-80dBW/700Hz	
1559-1587.42 MHz				-70dBW/MHz -80dBW/700Hz

⁹ Appendix B of the *FNPRM* lists two proposed subsections (h) to Section 25.216. This error was corrected in the *Federal Register* publication of the *FNPRM* and the second subsection (h) was changed to subsection (i). See 67 Fed. Reg. 61999.

¹⁰ The 1997 NTIA Petition and *March 1999 NPRM* proposed January 1, 2002, as the grandfathering date. The FCC ultimately adopted July 21, 2002 as the grandfathering date.

Limits Applicable to L-band METs Placed in Service After July 21, 2002, and for all L-band METs as of July 1, 2005

	Proposed by NTIA in September 1997	Proposed by FCC in March 1999 NPRM	Adopted by FCC in May 2002 Order	Proposed in May 2002 FNPRM
1559-1605 MHz	-70dBW/MHz -80dBW/700Hz	-70dBW/MHz -80dBW/700Hz	-70dBW/MHz -80dBW/700Hz	
1605-1610 MHz	Case-by-case basis	Case-by-case basis	-70dBW/MHz linearly increasing to -10dBW/ MHz	-70 dBW/MHz linearly increasing to -46 dBW/MHz; ¹¹ -80dBW/700Hz linearly increasing to -56dBW/700Hz ¹²
Carrier-off-state in 1559-1610 MHz	None	None	None	-77 dBW/MHz

Discussion

I. THE STRICTER EMISSION LIMIT IN THE 1605-1610 MHZ BAND AND THE PROPOSED CARRIER-OFF-STATE EMISSION LIMIT SHOULD APPLY ONLY TO L-BAND METS THAT ARE MANUFACTURED ONE YEAR OR MORE AFTER THE EFFECTIVE DATE OF AN *ORDER* ADOPTING THESE LIMITS

MSV disagrees with the Commission's proposal to apply a stricter limit in the 1605-1610 MHz band to all METs placed in service after July 21, 2002 and to apply a carrier-off-state limit to all L-band METs regardless of when they are placed in service. *FNPRM* at Appendix B (proposing to adopt 47 C.F.R. § 25.216 (g) and (h)). Rather, MSV urges the Commission to apply these new limits only to METs manufactured one year or more after the effective date of an *Order* adopting these limits. In addition, METs manufactured prior to one year or more after the effective date of an *Order* adopting these new limits should be grandfathered indefinitely.

The *FNPRM* is the first time the Commission has proposed a carrier-off-state limit or a stricter limit in the 1605-1610 MHz band for L-band METs. While MSV believes that its

¹¹ Only proposed for L-band METs placed in service after July 21, 2002.

¹² Only proposed for L-band METs placed in service after July 21, 2002.

existing authorized METs in service, in inventory, and in production today likely meet these proposed limits, it cannot know for certain without testing each and every MET, a nearly impossible task. It would be fundamentally unfair to apply these new limits retroactively to METs that were manufactured prior to the adoption of a rule specifying the final limits.

In addition, MET manufacturers should be afforded a period of one year to transition to these new limits. A transition period will allow manufacturers to make design changes, if necessary, to comply with these new rules. A one-year transition period is consistent with Commission precedent applying new emission limits to existing lawful consumer products.¹³

Finally, the Commission should only apply these new limits to METs that are manufactured rather than “placed in service” one year or more after the effective date of an *Order* adopting these limits. If an *Order* is eventually released adopting these new limits, MSV and its resellers will likely have METs in inventory that will be manufactured prior to but placed in service after the effective date of an *Order* adopting the new limits. If these new limits are applied to these METs, large quantities of METs in inventory may be rendered obsolete. Thus, MSV urges the Commission to apply the proposed carrier-off-state emission limit and the stricter emission limit in the 1605-1610 MHz band only to L-band METs manufactured one year or more after the effective date of an *Order* adopting these limits.

¹³ See, e.g., 1998 Biennial Regulatory Review -- Conducted Emissions Limits Below 30 MHz, *Order*, 17 FCC Rcd 10806 (May 30, 2002) (applying new conducted emission limits to new products authorized two years after publication of *Order* in *Federal Register* and to existing product lines that are manufactured three years after publication of *Order* in *Federal Register*); *Amendment of Part 15, Order on Reconsideration*, 79 FCC 2d 67 (April 9, 1980) (modifying Commission’s initial decision to apply new emission limits to computers manufactured nine months after *Order* was adopted and instead applying new limits to computers manufactured either fifteen months (for personal computers) or twenty-four months after *Order* was adopted).

II. THE COMMISSION SHOULD NOT REQUIRE L-BAND METS ALREADY AUTHORIZED UNDER EXISTING TITLE III BLANKET LICENSES TO OBTAIN PART 2 EQUIPMENT CERTIFICATION

In the *FNPRM*, the Commission proposes that L-band METs may not operate after July 1, 2005 unless they have been certified under Part 2 as complying with the emission limits in Section 25.216. *FNPRM* at Appendix B (proposing to add Section 25.216(i) to the rules).¹⁴ MSV urges the Commission to exempt from this requirement all L-band METs that are already authorized under existing Title III blanket MET licenses. Most of these METs were manufactured and authorized under blanket licenses in the mid to late 1990's. Under its arrangements with manufacturers, MSV accepted METs only after the manufacturer and MSV performed tests on sample units to ensure the METs met applicable emission limits. In addition, all of these blanket MET licenses were conditioned on compliance with the emission limits the Commission would eventually adopt in this proceeding.¹⁵ As an FCC licensee, MSV is aware of its obligations to ensure its licensed METs comply with Commission rules, including rules governing out-of-band emissions. Requiring MSV or its MET manufacturers to now undertake an equipment certification process for previously authorized METs would be redundant, costly,

¹⁴ In the *March 1999 NPRM*, the Commission proposed to require manufacturers to obtain equipment certification for GMPCS terminals, thereby enabling the manufacturer to receive an FCC identifier which in turn would allow the terminal to receive a "GMPCS-MoU ITU" Registry mark. *March 1999 NPRM* at ¶¶ 21-27. The Commission proposed to exempt from the certification requirement GMPCS terminals already operating over a U.S.-licensed system pursuant to an existing blanket license. *Id.* at ¶ 24. This proposal was supported by MSV and others. See Reply Comments of AMSC Subsidiary Corporation, IB Docket No. 99-67, at 5-6 (July 21, 1999); see also Comments of Comsat Corp., IB Docket No. 99-67, at 4 (June 21, 1999); Comments of Inmarsat Ltd., at 2 (June 21, 1999); Comments of Orbcomm, at 5 (June 21, 1999). The *FNPRM*, however, does not propose to exempt existing authorized METs from the requirement to receive equipment certification to the extent the MET will operate after July 1, 2005.

¹⁵ *AMSC Subsidiary Corp., Order and Authorization*, 10 FCC Rcd 9507, at ¶ 19; *TMI Communications and Company, L.P., Order and Authorization*, 14 FCC Rcd 20798, at ¶ 69; *TMI Communications and Company, L.P., Order and Authorization*, 15 FCC Rcd 18117, at ¶ 13; *Mobile Satellite Ventures*, 17 FCC Rcd 12894, at ¶ 11.

and time consuming. To the extent the Commission is concerned that licensed METs will not comply with the Commission's new emission limits, despite the obligation of blanket MET licensees to comply with Commission rules, MSV notes that it has never received a complaint regarding interference from its METs to GPS or GLONASS and it expects that this will remain to be the case with or without undergoing an equipment certification process. The Commission usually applies its certification procedure only to equipment that has been shown to cause harmful interference to authorized radio services.¹⁶ There is no evidence that L-band METs have been causing harmful interference to GNSS.

Applying Part 2 equipment certification to these already authorized METs would also raise a number of issues the Commission has not addressed in the *FNPRM*. For example, two manufacturers of L-band METs, Mitsubishi Electronics and Westinghouse Wireless Solutions, are no longer in the business of manufacturing METs. While MSV rather than the original MET manufacturer could seek to obtain Part 2 certification, much of the information needed for submission of an equipment certification application can only be obtained from these original manufacturers. Without the assistance of the original manufacturers, MSV would be in the position of having to reverse engineer its licensed METs, which may not be possible. For example, it would be difficult if not impossible for MSV to provide the following information without the assistance of the original manufacturer: the dc voltages applied to and dc currents into the final radio frequency amplifying device (Section 2.1033(c)(8)); a schematic diagram, which is often considered proprietary (Section 2.1033(c)(10)); and detailed descriptions of digital

¹⁶ See, e.g., *Review of Part 15 and other Parts of the Commission's Rules*, FCC 02-211, 2002 FCC LEXIS 3550 (July 19, 2002), at ¶ 16 (requiring radar detectors to be authorized pursuant to the Part 2 certification procedure and noting that "equipment with the potential to create significant interference to communication services requires a higher level of oversight than manufacturer's self-approval").

modulation techniques (Section 2.1033(c)(13)). These and other requirements are appropriate only for new devices where the manufacturer is available. While MSV as a blanket MET licensee has data which it believes demonstrates that its METs comply with the Section 25.216 limits, it does not have all of the documentation and test results required for certification under Part 2. In addition, even if MSV were to provide all of the required information and were to receive an equipment certification, the Commission does not explain how MSS licensees are to label the existing METs used by consumers today, as required by Commission rules for all equipment authorized under the certification procedure. 47 C.F.R. § 2.925. For these reasons, MSV urges the Commission to exempt from the equipment certification requirement all L-band METs that are already authorized under existing Title III blanket MET licenses.

Conclusion

For the reasons stated above, MSV requests that the Commission act consistently with the views expressed herein.

Respectfully submitted,

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